

Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A wafer edge exposure apparatus for exposing an edge of a semiconductor wafer having a resist thereon, comprising:

an optical section for radiating exposure light toward the edge of the semiconductor wafer, the semiconductor wafer having a resist thereon;

a sensor for detecting the height of the edge; and

a focus position control mechanism for controlling the focal position of exposure light originating from the optical section, on the basis of a value detected by the sensor.

2. (Original) The wafer edge exposure apparatus according to claim 1, wherein the sensor includes a focal sensor for sensing a distance between the optical section and the edge; and

the focus position control mechanism controls a focusing position of exposure light such that the focus of exposure light originating from the optical section matches the height of an edge surface.

3. (Original) The wafer edge exposure apparatus according to claim 1, wherein the focus position control mechanism includes a position control mechanism for controlling a relative position between the optical section and the edge.

4. (Original) The wafer edge exposure apparatus according to claim 1, wherein the focus position control mechanism includes a zooming mechanism for controlling the focal distance of the exposure light originating from the optical section.

5. (Previously Presented) A wafer edge exposure method for exposing an edge of a semiconductor wafer having a resist thereon, comprising:

a detection step for detecting the height of the edge of the semiconductor wafer, the semiconductor wafer having a resist thereon;

a control step for controlling the focusing position of exposure light radiated toward the edge, on the basis of a height of the edge; and
an exposure step of radiating exposure light towards the edge after the control step.

6. (Original) The wafer edge exposure method according to claim 5, wherein the detection step includes a step of sensing a distance between an optical section for outputting exposure light and the edge; and

the control step includes a focus control step for controlling a focusing position of the exposure light originating from the optical section such that the focus of the exposure matches the height of an edge surface.

7. (Original) The wafer edge exposure method according to claim 6, wherein the step of controlling a focus includes a step of controlling a relative position between the optical section and the edge.

8. (Original) The wafer edge exposure method according to claim 6, wherein the focus position control step includes a step of controlling the focal distance of the exposure light by means of driving a zooming mechanism of the optical section.

9. (Previously presented) The wafer edge exposure apparatus of claim 1, further comprising:

a chuck for retaining the semiconductor wafer thereon; and
a drive for rotating the chuck so that the radiating exposure light irradiates only an annular portion of the edge.

10. (Previously presented) The wafer edge exposure method of claim 5, wherein only an annular portion of the edge is irradiated in the exposure step.

11. (Currently Amended) A wafer edge exposure apparatus for exposing an edge of a semiconductor wafer, comprising:

an optical section for radiating exposure light toward the edge of the semiconductor wafer;
a sensor for detecting the height of the edge; and
a focus position control mechanism for controlling the focal position of exposure light originating from the optical section, on the basis of a ~~value~~ height of the edge detected by the sensor.

12. (Previously Presented) A wafer edge exposure method for exposing an edge of a semiconductor wafer, comprising:

a detection step for detecting the height of the edge of the semiconductor wafer;
a control step for controlling the focusing position of exposure light radiated toward the edge, on the basis of a height of the edge; and
an exposure step of radiating exposure light towards the edge after the control step.